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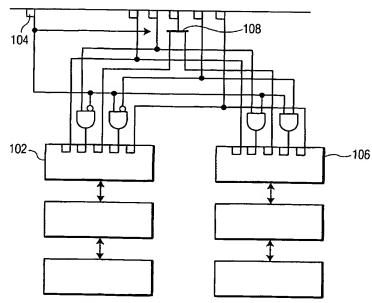
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[Continued on next page]

## (54) Title: CONNECTING MULTIPLE TEST ACCESS PORT CONTROLLERS THROUGH A SINGLE TEST ACCESS PORT



(57) Abstract: Multiple test access port (TAP) controllers on a single chip are accessed, while maintaining the appearance to an outside observer of having only a single test access port controller. By adding a single bit to a data register (212) of each of a plurality of TAP controllers (102, 106), along with straightforward combinational logic, the plurality of TAP controllers can be accessed without the need for additional chip pins, and without the need for additional TAP controllers. Toggling the state of the added bits in the respective data registers of the plurality of TAP controllers provides the control information for either selecting one TAP controller or daisy-chaining of the plurality of TAP controllers.

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